

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE Group Art Unit 2834

Patent Application of

Paul Steven Mullin, et al.

Application No. 10/730,153

Confirmation No. 2172

Filed: December 8, 2003

Examiner: Not Yet Known

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## INFORMATION DISCLOSURE STATEMENT PURSUANT TO 37 CFR §1.97(b)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

The Examiner's attention is directed to the references which are listed on the attached Form PTO/SB/08A (10 pages) and PTO/SB/08B (1 page).

Citation of these references is respectfully requested.

No concession is made that these documents are prior art, and Applicant expressly reserves the right to antedate the documents as may be appropriate.

Respectfully submitted,

Chad W. Shea Reg. No. 48,470

File No. 010121-9954-00 Michael Best & Friedrich LLP 100 East Wisconsin Avenue Milwaukee, Wisconsin 53202-4108 (262) 956-6560 T:\clienta\010121\9954\F0080971.1

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| INFORMATION DESCLOSURE STATEMENT BY |    |                     | Application Number                     | 10/730,153   |
| APR 0 9 2004 APPLICANT              |    | Filing Date         | December 8, 2003                       |  |
|                                     |    | First Name Inventor | Paul Steven Mullin                     |  |
|                                     |    |                     | Group Art Unit                         | 2834   |
| (use asymany sheets as necessary)   |    | Examiner Name       | Not Yet Known                          |  |
| Sheet 1                             | of | 10                  | Attorney Docket Number                 | 010121-9954-00   |

|                      | U.S.                        | PATENT DOCUMENTS                                | U.S. PATENT DOCUMENTS                    |  |  |  |  |
|----------------------|-----------------------------|---|--|--|--|--|--|
| Examiner<br>Initials | U.S. Patent Document Number | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited<br>Document |  |  |  |  |
|                      | RE36,860                    | Muller  | 9/12/2000                                |  |  |  |  |
|                      | 4,230,976                   | Muller  | 10/28/1980                               |  |  |  |  |
|                      | 4,376,261                   | von der Heide et al.                            | 3/8/1983                                 |  |  |  |  |
|                      | 5,130,591                   | Sato  | 7/14/1992                                |  |  |  |  |
|                      | 5,349,275                   | Muller  | 9/20/1994                                |  |  |  |  |
|                      | 5,767,639                   | Sakaguchi et al.                                | 6/16/1998                                |  |  |  |  |
|                      | 6,211,635                   | Kambe et al.                                    | 4/3/2001                                 |  |  |  |  |
|                      | 6,271,638                   | Erdman et al.                                   | 8/7/2001                                 |  |  |  |  |
|                      | 6,307,337                   | Nelson  | 10/23/2001                               |  |  |  |  |
|                      | 6,348,752                   | Erdman et al.                                   | 2/19/2002                                |  |  |  |  |
|                      | 6,414,408                   | Erdman et al.                                   | 7/2/2002                                 |  |  |  |  |
|                      | 6,479,957                   | Erdman et al.                                   | 11/12/2002                               |  |  |  |  |
|                      | 6,061,724                   | Ries et al.                                     | 5/9/2000                                 |  |  |  |  |
|                      | 6,183,136                   | Dingman   | 2/6/2001                                 |  |  |  |  |
|                      | 4,641,422                   | Weaver  | 2/10/1987                                |  |  |  |  |
|                      | RE32,654                    | Jackson, Jr.                                    | 4/26/1988                                |  |  |  |  |
|                      | 4,758,751                   | Hosoya et al.                                   | 7/19/1988                                |  |  |  |  |

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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT |                                   |    | EMENT BY            | Application Number     | 10/730,153       |  |
|   |                                   |    |                     | Filing Date            | December 8, 2003 |  |
|   |                                   |    | First Name Inventor | Paul Steven Mullin     |                  |  |
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| _ (u  | (use as many sheets as necessary) |    | Examiner Name       | Not Yet Known          |                  |  |
| Sheet   | 2                                 | of | 10                  | Attorney Docket Number | 010121-9954-00   |  |

|                      | U.S. PATENT DOCUMENTS       |   |                                       |  |  |
|----------------------|-----------------------------|---|---------------------------------------|--|--|
| Examiner<br>Initials | U.S. Patent Document Number | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document |  |  |
|                      | 5,030,867                   | Yamada et al.                                   | 7/9/1991                              |  |  |
|                      | 5,298,826                   | Lee et al.                                      | 3/29/1994                             |  |  |
|                      | 5,684,352                   | Mita et al.                                     | 11/4/1997                             |  |  |
|                      | 6,069,428                   | Nelson  | 5/30/2000                             |  |  |
|                      | 6,204,584                   | Muszynski                                       | 3/20/2001                             |  |  |
|                      | 4,973,872                   | Dohogne   | 11/27/1990                            |  |  |
|                      | 5,488,260                   | Heyraud   | 1/30/1996                             |  |  |
|                      | 5,627,423                   | Marioni   | 5/6/1997                              |  |  |
|                      | 6,069,421                   | Smith et al.                                    | 5/30/2000                             |  |  |
|                      | 2001/0024068                | Aizawa et al.                                   | 9/27/2001                             |  |  |
|                      | 2003/0178903                | Rapp  | 9/25/2003                             |  |  |
|                      | 3,969,645                   | Spotts et al.                                   | 7/13/1976                             |  |  |
|                      | 4,338,535                   | Kohzai et al.                                   | 7/6/1982                              |  |  |
|                      | 4,482,832                   | Minton  | 11/13/1984                            |  |  |
|                      | 4,573,003                   | Lipo  | 2/25/1986                             |  |  |
|                      | 4,600,864                   | Sato  | 7/15/1986                             |  |  |
|                      | 4,701,654                   | Tatukawa et al.                                 | 10/20/1987                            |  |  |

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|   |   |               |                  | Group Art Unit         | 2834               |
| (use as many sheets as necessary)                               |   | Examiner Name | Not Yet Known    |                        |                    |
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|                      | 4,998,032                   | Burgbacher                                      | 3/5/1991                              |  |  |  |
|                      | 5,170,083                   | Burgbacher                                      | 12/8/1992                             |  |  |  |
|                      | 5,331,245                   | Burgbacher et al.                               | 7/19/1994                             |  |  |  |
|                      | 5,343,104                   | Takahashi et al.                                | 8/30/1994                             |  |  |  |
|                      | 5,436,519                   | Takahashi et al.                                | 7/25/1995                             |  |  |  |
|                      | 5,659,217                   | Petersen  | 8/19/1997                             |  |  |  |
|                      | 5,670,836                   | Horst   | 9/23/1997                             |  |  |  |
|                      | RE35,763                    | Burgbacher                                      | 4/7/1998                              |  |  |  |
|                      | 5,783,890                   | Mulgrave  | 7/21/1998                             |  |  |  |
|                      | 5,844,346                   | Kolomeitsev et al.                              | 12/1/1998                             |  |  |  |
| 3 1                  | 6,194,800                   | Maruyama et al.                                 | 2/27/2001                             |  |  |  |
|                      | 6,335,582                   | Abukawa et al.                                  | 1/1/2002                              |  |  |  |
|                      | 6,522,046                   | Ikeda et al.                                    | 2/18/2003                             |  |  |  |
|                      | 2002/0021052                | Asao  | 2/21/2002                             |  |  |  |
|                      | 4,086,533                   | Ricouard et al.                                 | 4/25/1978                             |  |  |  |
|                      | 4,546,300                   | Shaikh  | 10/8/1985                             |  |  |  |
|                      | 4,603,664                   | Jackson   | 8/5/1986                              |  |  |  |

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|                      | 4,618,797                   | Cline   | 10/21/1986                               |
|                      | 4,728,834                   | Kumar et al.                                    | 3/1/1988                                 |
|                      | 5,394,043                   | Hsai  | 2/28/1995                                |
|                      | 5,629,574                   | Cognetti et al.                                 | 5/13/1997                                |
|                      | 6,118,198                   | Hollenbeck et al.                               | 9/12/2000                                |
|                      | 6,133,666                   | Hollenbeck et al.                               | 10/17/2000                               |
|                      | 6,232,687                   | Hollenbeck et al.                               | 5/15/2001                                |
|                      | 6,271,609                   | Hollenbeck et al.                               | 8/7/2001                                 |
|                      | 6,300,695                   | Neal  | 10/9/2001                                |
|                      | 6,310,455                   | Siraky et al.                                   | 10/30/2001                               |
|                      | 6,362,554                   | Neal  | 3/26/2002                                |
|                      | 6,437,464                   | Neal  | 8/20/2002                                |
|                      | 6,532,193                   | Fehse et al.                                    | 3/11/2003                                |
|                      | 6,617,721                   | Neal  | 9/9/2003                                 |
|                      | 2002/0109426                | Peter et al.                                    | 8/15/2002                                |
|                      | 4,427,462                   | Senno et al.                                    | 1/24/1984                                |
|                      | 4,473,766                   | Obergfell et al.                                | 9/25/1984                                |

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|                      | 5,927,249                   | Ackermann et al.                                | 7/27/1999                             |  |  |  |
|                      | 4,847,527                   | Dohogne   | 7/11/1989                             |  |  |  |
|                      | 4,992,688                   | Cap et al.                                      | 2/12/1991                             |  |  |  |
|                      | 5,148,070                   | Frye et al.                                     | 9/15/1992                             |  |  |  |
|                      | 5,461,270                   | Didier  | 10/24/1995                            |  |  |  |
|                      | 5,877,574                   | Molnar  | 3/2/1999                              |  |  |  |
|                      | 5,996,209                   | Molnar et al.                                   | 12/7/1999                             |  |  |  |
|                      | 6,232,687                   | Hollenbeck et al.                               | 5/15/2001                             |  |  |  |
|                      | 6,239,532                   | Hollenbeck et al.                               | 5/29/2001                             |  |  |  |
|                      | 6,324,745                   | Poag et al.                                     | 12/4/2001                             |  |  |  |
|                      | 6,497,035                   | Ratliff   | 12/24/2002                            |  |  |  |
|                      | 2003/0098660                | Erdman et al.                                   | 5/29/2003                             |  |  |  |
|                      | 4,883,997                   | DeCesare  | 11/28/1989                            |  |  |  |
|                      | 4,942,323                   | DeCesare  | 7/17/1990                             |  |  |  |
|                      | 5,248,911                   | Joseph  | 9/28/1993                             |  |  |  |
|                      | 5,345,129                   | Molnar  | 9/6/1994                              |  |  |  |
|                      | 5,881,447                   | Molnar  | 3/16/1999                             |  |  |  |

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|                      | U.S.                        | PATENT DOCUMENTS                                |  |
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| Examiner<br>Initials | U.S. Patent Document Number | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited<br>Document |
|                      | 5,881,448                   | Molnar  | 3/16/1999                                |
|                      | 6,501,202                   | Whaley  | 12/31/2002                               |
|                      | 4,007,390                   | Muller et al.                                   | 2/8/1977                                 |
|                      | 4,174,484                   | Schmider  | 11/13/1979                               |
|                      | 4,181,867                   | Muller  | 1/1/1980                                 |
|                      | 4,217,508                   | Uzuka   | 8/12/1980                                |
|                      | 4,259,603                   | Uchiyama et al.                                 | 3/31/1981                                |
|                      | 4,540,906                   | Blom  | 9/10/1985                                |
|                      | 4,604,665                   | Muller et al.                                   | 8/5/1986                                 |
|                      | 4,647,803                   | von der Heide et al.                            | 3/3/1987                                 |
|                      | 4,668,898                   | Harms et al.                                    | 5/26/1987                                |
|                      | 4,698,542                   | Muller  | 10/6/1987                                |
|                      | 4,734,606                   | Најес   | 3/29/1988                                |
|                      | 4,882,511                   | von der Heide                                   | 11/21/1989                               |
|                      | 4,992,162                   | Shiraki et al.                                  | 5/1/1990                                 |
|                      | 4,934,014                   | Yamamoto  | 6/19/1990                                |
|                      | 4,934,041                   | Hoover et al.                                   | 6/19/1990                                |

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|                      | 5,008,573                   | Beppu et al.                                    | 4/16/1991                                |
|                      | RE33,813                    | von der Heide et al.                            | 2/4/1992                                 |
|                      | 5,109,174                   | Shewell   | 4/28/1992                                |
|                      | RE34,268                    | Muller  | 6/1/1993                                 |
|                      | 5,252,873                   | Hamamoto et al.                                 | 10/12/1993                               |
|                      | 5,319,270                   | Tanaka et al.                                   | 6/7/1994                                 |
|                      | 5,357,160                   | Kaneda et al.                                   | 10/18/1994                               |
|                      | 5,394,043                   | Hsia  | 2/28/1995                                |
|                      | 5,410,201                   | Tanaka et al.                                   | 4/25/1995                                |
|                      | 5,457,350                   | Sakamaki et al.                                 | 10/10/1995                               |
|                      | 5,552,653                   | Nose  | 9/3/1996                                 |
|                      | 5,578,883                   | Sakashita et al.                                | 11/26/1996                               |
|                      | 5,610,457                   | Kurita  | 3/11/1997                                |
|                      | 5,610,458                   | Baker et al.                                    | 3/11/1997                                |
|                      | 5,650,678                   | Yokozawa et al.                                 | 7/22/1997                                |
|                      | 5,650,679                   | Boggs, III et al.                               | 7/22/1997                                |
|                      | 5,663,604                   | Takahashi                                       | 9/2/1997                                 |

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| Examiner<br>Initials  | U.S. Patent Document Number | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited<br>Document |  |  |
|                       | 5,783,880                   | Teshima et al.                                  | 7/21/1998                                |  |  |
|                       | 5,798,589                   | Ohi et al.                                      | 8/25/1998                                |  |  |
|                       | 5,818,133                   | Kershaw et al.                                  | 10/6/1998                                |  |  |
|                       | 5,883,455                   | Fukasawa et al.                                 | 3/16/1999                                |  |  |
|                       | 5,925,948                   | Matsumoto                                       | 7/20/1999                                |  |  |
|                       | 5,982,066                   | Marracino et al.                                | 11/9/1999                                |  |  |
|                       | 5,990,589                   | Ushikoshi                                       | 11/23/1999                               |  |  |
|                       | 6,005,312                   | Yamane  | 12/21/1999                               |  |  |
|                       | 6,020,660                   | Wright  | 2/1/2000                                 |  |  |
|                       | 6,144,124                   | Nakagawa et al.                                 | 11/7/2000                                |  |  |
|                       | 6,160,334                   | Teshima et al.                                  | 12/12/2000                               |  |  |
|                       | 6,320,288                   | Suzuki et al.                                   | 11/20/2001                               |  |  |
|                       | 3,912,956                   | Muller  | 10/14/1975                               |  |  |
|                       | 4,554,473                   | Muller  | 11/19/1985                               |  |  |
|                       | 5,783,881                   | Best et al.                                     | 7/21/1998                                |  |  |
|                       | 3,805,134                   | Osamu et al.                                    | 4/16/1974                                |  |  |
|                       | 3,809,935                   | Kristen et al.                                  | 5/7/1974                                 |  |  |

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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT |   |    |    | Application Number     | 10/730,153         |  |
|   |   |    |    | Filing Date            | December 8, 2003   |  |
|   |   |    |    | First Name Inventor    | Paul Steven Mullin |  |
|   |   |    |    | Group Art Unit         | 2834               |  |
| (use as many sheets as necessary)             |   |    | ע) | Examiner Name          | Not Yet Known      |  |
| Sheet   | 9 | of | 10 | Attorney Docket Number | 010121-9954-00     |  |

|                      | U.S.                        | PATENT DOCUMENTS                                |                                       |
|----------------------|-----------------------------|---|---------------------------------------|
| Examiner<br>Initials | U.S. Patent Document Number | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document |
|                      | 4,988,905                   | Tolmie, Jr.                                     | 1/29/1991                             |
|                      | 3,024,377                   | Tupper  | 3/6/1962                              |
|                      | 3,604,961                   | Saldinger                                       | 9/14/1971                             |
|                      | 3,964,903                   | Deming  | 10/3/1972                             |
|                      | 3,778,897                   | Bock et al.                                     | 12/18/1973                            |
|                      | 3,983,621                   | Donahoo   | 10/5/1976                             |
|                      | 4,013,910                   | Deming  | 3/22/1977                             |
|                      | 4,134,035                   | Donahoo   | 1/9/1979                              |
|                      | 4,638,201                   | Feigel  | 1/20/1987                             |
|                      | 4,707,910                   | Saeed   | 11/24/1987                            |
|                      | 4,769,567                   | Kurauchi et al.                                 | 9/6/1988                              |
|                      | 4,910,420                   | Hoover et al.                                   | 3/20/1990                             |
|                      | 5,086,245                   | Sieja et al.                                    | 2/4/1992                              |
|                      | 5,107,159                   | Kordik  | 4/21/1992                             |
|                      | 5,173,628                   | Yoshida et al.                                  | 12/22/1992                            |
|                      | 5,258,697                   | Ford et al.                                     | 11/2/1993                             |
|                      | 5,610,462                   | Takahashi                                       | 3/11/1997                             |
|                      | 5,619,086                   | Steiner   | 4/8/1997                              |
|                      | 5,627,424                   | Steiner   | 5/6/1997                              |
|                      | 5,698,919                   | Obara   | 12/16/1997                            |
|                      | 5,747,908                   | Saneshige et al.                                | 5/5/1998                              |
|                      | 5,796,204                   | Woo   | 8/18/1998                             |

| Examiner  | Date       | - |
|-----------|------------|---|
| Signature | Considered |   |

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|                                   |    |    |    | Filing Date            | December 8, 2003   |  |
|                                   |    |    |    | First Name Inventor    | Paul Steven Mullin |  |
|                                   |    |    |    | Group Art Unit         | 2834               |  |
| (use as many sheets as necessary) |    |    | y) | Examiner Name          | Not Yet Known      |  |
| Sheet                             | 10 | of | 10 | Attorney Docket Number | 010121-9954-00     |  |

|                      | U.S. PATENT DOCUMENTS       |   |                                       |  |  |
|----------------------|-----------------------------|---|---------------------------------------|--|--|
| Examiner<br>Initials | U.S. Patent Document Number | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document |  |  |
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|                      |                             |   |                                       |  |  |
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|                      |                             |   |                                       |  |  |
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|                      | FOREIGN PATENT DOCUMENTS |                                   |  |  |                        |                     |
|----------------------|--------------------------|-----------------------------------|--|--|------------------------|---------------------|
| Examiner<br>Initials | Country<br>Code          | Foreign Patent Document<br>Number | Name of Patentee or<br>Applicant of Cited Document | Date of Publication of<br>Cited Document | Translation            | English<br>Abstract |
|                      | GB                       | GB2072431A                        | Leung et al.                                       | 9/30/1981                                |                        | X                   |
|                      | JP                       | JP1264556A                        | Eiichi   | 10/20/1989                               |                        | X                   |
|                      | JP                       | JP2111248A                        | Shoei et al.                                       | 4/24/1990                                |                        | X                   |
|                      | DE                       | DE29516656U1                      | ebm Electrobau Mlfingen GmbH                       | 1/25/1996                                | Statement of Relevance |                     |
|                      | DE                       | DE3101629A1                       | Ruff   | 8/26/1982                                | Statement of Relevance |                     |
|                      | EP                       | EP0286905B1                       | Felgel et al.                                      | 7/28/1993                                | Statement of Relevance |                     |
|                      | EP                       | EP0376530A2                       | Archer et al.                                      | 7/4/1990                                 |                        |                     |
|                      | EP                       | EP0565312A2                       | Erdman et al.                                      | 10/13/1993                               |                        |                     |
|                      | EP                       | EP0836008B1                       | Robba et al.                                       | 11/20/2002                               |                        |                     |
|                      | EP                       | EP0926448B1                       | Martin et al.                                      | 6/30/1999                                | _                      |                     |

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| Application Number     | 10/730,153         |  |  |
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| First Named Inventor   | Paul Steven Mullin |  |  |
| Group Art Unit         | 2834               |  |  |
| Examiner Name          | Not Yet Known      |  |  |
| Attorney Docket Number | 010121-9954-00     |  |  |

| ame of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, m, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.  Int of Relevance for foreign patent numbers DE3101629A1; DE29516656U1; and EP0286905B1; 1 page.  CY et al.; Info; mvl Motoren Ventilatoren; Motoren Ventilatoren Landshut GmbH; September 2001; 8 |
|---|
|   |
| CY et al.; Info; mvl Motoren Ventilatoren; Motoren Ventilatoren Landshut GmbH; September 2001; 8  |
|   |
| MITH; Fractional Horsepower Motors and Specialty Blowers; Bulletin 7000; January 2001; 8 pages.   |
| R-COLMAN COMPANY; Shaded-Pole Motors; Type GYAZ Reversible Geared Motors; Rockford, February 1969; 2 pages.   |
| R-COLMAN COMPANY; Shaded-Pole Motors; Types AYAE, DYAE, KYAE, OYAE Reversible for iic Control; Rockford, Illinois; August 1969; 2 pages.  |
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## Statement of Relevance for: DE 3101629 A1; DE 29516656 U1; and EP 0 286 905 B1.

The German laying open publication **DE 3101629 A1**, which was filed on January 20, 1981 and published on August 26 1982, is assigned to TELDIX GmbH. As can be seen from Fig. 1, this document shows a collectorless DC motor. Reference numeral 4 designates the rotor, which is held by two bearing brackets 10 and 11. The stator is formed by several bobbins 18 to 21 that are arranged on the circuit boards 16 and 17. This document also seems to show a common fastener that holds together the two halves of the housing and the electronic circuitry through respectively aligned bores.

German utility model **DE 29516656 U1**, which is assigned to emb Elektrobau Mulfingen GmbH & Co., was filed on October 21, 1995 and published on January 25, 1996. This German utility model discloses a brushless DC motor having an external rotor. As can be seen, for instance, from Fig. 1, the electronic circuitry is mounted on a printed circuit board 12, which is arranged between the two bearing brackets 1 and 16.

EP 0 286 905 B1, assigned to Alcatel SEL, was published on July 28, 1993. This document relates to an electrically commutated collectorless DC motor, having a stator 3 with a stator winding 14 and a rotor opening formed therein. This document also discloses the feature of a control board 17, whereon all sensors 26 are provided. The DC motor, according to this reference, also comprises a printed circuit board 17 and two bearing shields 5 and 6 that have at least one bore for receiving the rotor bearings.

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